

STEAM TURBINES

patent system of governing mixed-pressure turbines. Fig. 45 shows isometrically the design adopted by the Metropolitan-Vickers Company based on this patent. The valves are operated by oil pressure, as in the case of their high-pressure turbines.

The low-pressure admission valve is suspended from one end, and the high-pressure admission valve from the other end of a cross lever N, pivoted at one end of a piston rod working in the cylinder c. The cylinder 0 contains a spring pressing upon the piston on the valve rod, tending always

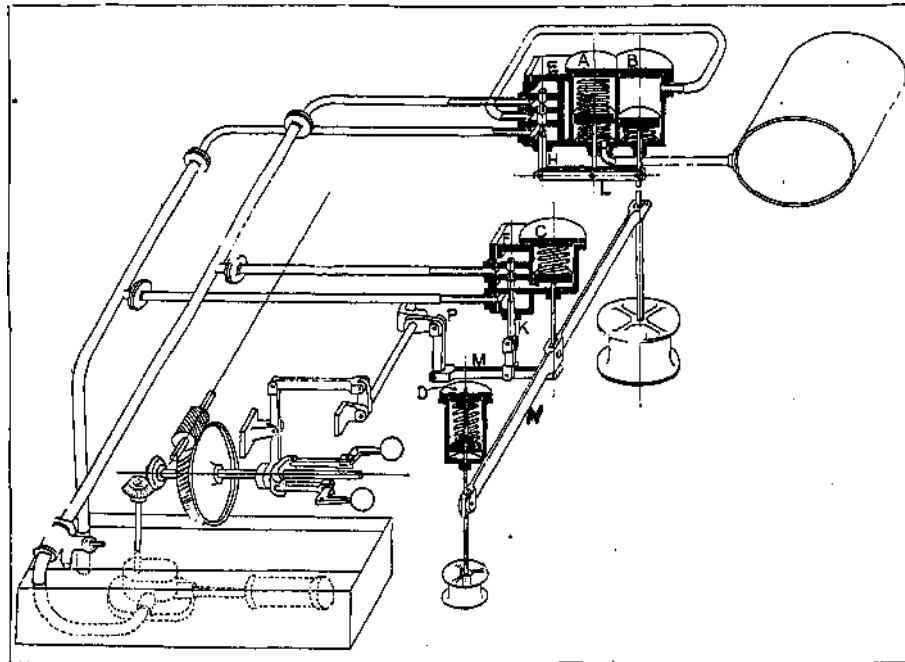


Fig. 45.—Isometric View of Valve Gear of Metropolitan-Vickers Mixed-pressure Turbine

to keep the high-pressure admission valve on its seat. It will be observed that the plunger rod in the cylinder B is cut off immediately below the lever L, and is not continuous with the suspension rod of the low-pressure admission valve. The low-pressure steam main is connected by a small pipe to the underside of the piston in the cylinder A, springs above and below this piston being selected for the particular limits in the low-pressure main through which the governor gear is required to operate. The oil is continuously

pumped at about 50 lb. pressure to the chests E and F, any surplus returning to the oil tank through the relief valve shown. Assuming that a drop of pressure takes place in the low-pressure steam main, the equilibrium in the cylinder A is upset and the lever L is rocked downwards with its fulcrum on the centre line of the cylinder B. This pulls down the valve H and opens up the oil pressure through the port shown to the top of the piston in B. The effect of this is to cause the piston to descend against the spring beneath